

International Journal of Horticultural Science 2010, 16 (4): 71–73.
Agroinform Publishing House, Budapest, Printed in Hungary
ISSN 1585-0404

Economic figures of apple production at national level of Hungary

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Summary: After the change of the political system the main loser was in Hungary the fruit-growing branch. The yields varied at high amplitudes, and the production increased slowly in spite of multiple planting activities. The European Union ranked fruit production “loosely” to the products, which allows the extension of its markets. Thus I decided to analyse the economic relations of the period between 2002 and 2008 in order to reveal the main effects of movements. The pictures are the resultants of a heterogeneous population, which cannot be influenced on the level of enterprises. But they are utilised for the recognition of challenges and trends on the level of branches of economy. The immediate costs increased the production monotonously, which cannot be compensated by a thrifty management of the general costs. Thus costs of production increased dramatically, whereas the marketing of products could not realise the values.

Key words: apple, management of the branch, value and costs of production, planning on the branch level, income

Introduction

The main loser of the political changes was the branch of fruit production. The variation of large amplitude in yields kept continuing and production increased little in spite of various programs of plantings. The main concerns of the fruit production were caused by the structural transformation of production. The lack of a well considered policy of subsidization during the last 10 years did not help to rapid abolishment (eradication) of inefficient plantations. Beside the change of structure, the lack of innovative adaptation of new production methods lagged, thus the offer of commodities could not come up to the western standards in uniformity and quality. The “loose” regulations of the EU, however, allow a policy of extending production and to penetrate new markets.

Just at the same time, also the international market of vegetables and fruits changed a lot. The earlier ratio of processed versus fresh produces (60:40%) got inverted, fresh consumption has been preferred. It was observed in Hungary too. The increasing ratio of fresh fruit on the market required a vigorous development of an up to date handling and packing system of fresh fruit, a new infrastructure for new technologies to be established in the producing plants.

In order to find useful measures, the economical analysis of the period 2002–2008 has been undertaken.

Materials and methods

The relevant fundamental data were furnished by the AKI (Institute of Agricultural Research), which were registered and processed yearly. For the respective period (2008–2002),

data of values, costs and incomes have been introduced in tables as being processed for obtaining parameters of economic movements. The values registered are means of a rather heterogeneous population, therefore cannot be used to arrive to direct conclusions on the level of enterprises. In spite of that, generally they are very informative.

Results

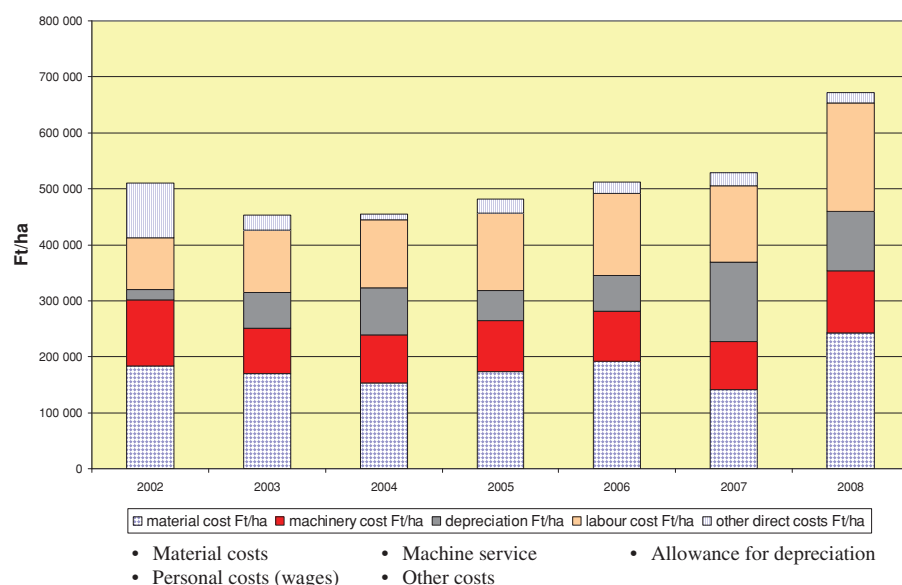
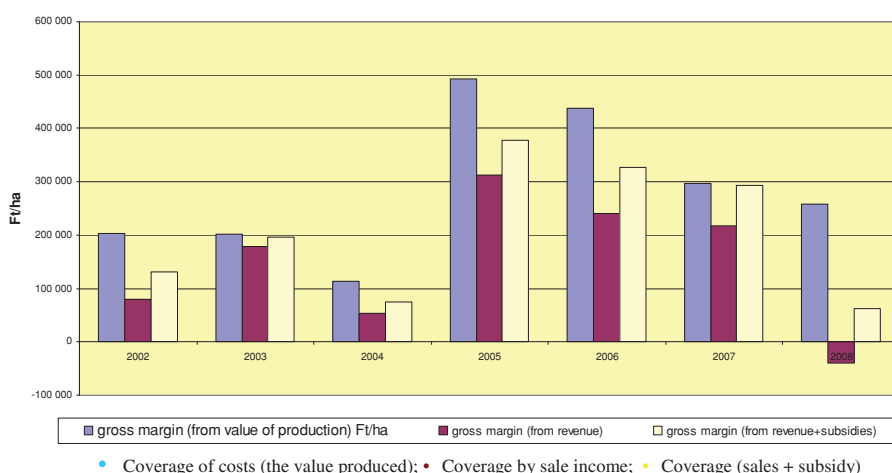
The data of *Table 1* are to be read from macro-economical viewpoint. The mean yields are on the country level around 20–25 tons/hectare with minor yearly variation, but being considered essentially stable. The plantations were nevertheless very variable in age and intensity. The purpose of production and the marketing outlooks were very heterogeneous and uncoordinated, which caused a dual situation on a rather extended surface. The market of apple for fresh consumption supposes under the present conditions 35–45 t/ha yields, which would mean at adequate technical intensity a stable yield of 45 t/ha. If a decisive extension of the area ensues, the countrywide mean yield may diminish to 30–35 t/ha, which will be observed in the production costs too. The mean prices is also hectic, being variable between 26 Ft/kg and 40 Ft/kg, let alone the outstanding season of 2007. The Hungarian apple growing area received 64 000–102 000 Forint/ha/year as subvention in the period 2005–2008. The value produced (subvention included) increased from 620 000 Ft. in 2002 to 950 000 Ft. in 2005, but in 2008, 910 000 Ft. per hectare was calculated. In a clearly, purposefully aimed production with a consequent technology not only the yield may increase but also the producer's prices on the markets up to a set level.

Table 1. The production value of apple growing in enterprises relevant on the market

Item	unit	2002	2003	2004	2005	2006	2007	2008
Produced value main product	Ft/ha	564632	611204	535812	884165	842583	726182	810350
Mean yield	t/ha	21.73	19.13	21.18	22.51	21.48	9.98	25.89
Mean producer's price	Ft/t	25 984	31 950	25 298	39 272	39 231	72 784	31 300
Subsidies (national & EU)	Ft/ha	51 485	16 681	21 357	63 824	85 498	76 336	102 029
Value produced	Ft/ha	616117	627 885	557 169	947 989	928 081	802 518	912 379

Source: AKI and original

Figure 1 presents the composition of immediate costs of apple production. The material costs drew by 32% between 2002 and 2008. The costs of organic manure declined to be negligible countrywide, which is due to the reduced tendency of planting. Other components to be of minor importance are the costs of rootstocks compared with the structure of production and the costs of development. The use of chemical fertilisers was variable, but in 2008, it was near 30 000 HUF per hectare, that of phytosanitary products: 210 000 HUF/ha. Those mean 70% and 30% more costs compared with 2002.

**Figure 1.** Composition of immediate costs of apple production in the relevant apple growing enterprises**Figure 2.** The components of coverage in apple production during the 7 years examined (HUF/ha)

The machine costs were 110 000 HUF/ha in 2002, diminished a little, than recovered again in 2008. The increment was in the use of machines of the own, from 2003 to 2008, as 55 000 to 85 000 HUF/ha, which is 45%. The costs for hired mechanic works diminished from 43 000 to 23 000 HUF/ha. Those are in harmony with each other and calls our attention to more effective use of the owned machines.

The changes of the specific costs of depreciation mean the same tendencies. In 2004, the year of the union with the EU, the mechanisation experienced encouragement in agriculture. As a consequence, the cost in 2002 was 18 000

HUF/ha, and it grew to 63 000 HUF in 2003, then until 2007-2008, it grew by 30–50%. So in those years the calculated cost was 110 000 and 140 000 HUF.

The personal (wages) costs of 2002 grew with about 100 000 HUF until 2008, which is more than 100% increment. The components of this item are the wages and the accessories, which grew 14 and 10% respectively

The other costs varied after 2003 between 18 000 and 25 000 HUF.

The immediate costs grew between 2002 and 2008 by 58%. This is a significant increment of yearly 8%.

The general costs diminished from 51000 HUF to 41000 HUF, which mean a yearly 6% reduction between 2002 and 2008 71% as a sum.

In Figure 2, we see the coverage of apple production analysed for the seven-year-long period 2002–2008. Three categories are examined: the value produced, the income together with the subsidy and the income gained by the sale after having subtracted the immediate costs for the sake of comparability. That way, three different results emerged.

The coverage calculated from the value produced was always (2002–2008) positive and followed the changes in value. After having subtracted the general costs, the result was positive. But this value could not be realised by the sales. In Table 2, it

Table 2. The variation of the value produced, the costs and the incomes during 2002-2008

No.	Item	unit	2002	2003	2004	2005	2006	2007	2008
1	Output value	Ft/ha	564632	611204	535812	884165	842583	726182	810350
2	Produced value (TÉ)	Ft/ha	616 117	627 885	557 169	947 989	928 081	802 518	912 379
3	Income + subsidy (Á+T)	Ft/ha	543 663	622 477	518 215	832 861	817 280	799 456	715 496
4	Income by sale (Á)	Ft/ha	492 178	605 796	496 858	769 037	731 782	723 120	613 467
5	Immediate costs	Ft/ha	412 661	426 755	444 290	455 853	490 996	505 558	653 806
6	Cover by produced value (FÖTÉ)	Ft/ha	203 456	215 224	144 508	535 328	515 420	389 857	499 718
7	Cover by income+subsidy (FÖÁT)	Ft/ha	131 002	209 816	105 554	420 200	404 619	386 795	302 835
8	Cover by income (FÖÁ)	Ft/ha	79 517	193 135	84 197	356 376	319 121	310 459	200 806
9	General costs	Ft/ha	50 844	45 855	77 081	42 338	41 698	45 580	41 934
10	Net income by produced value TĚ	Ft/ha	152 612	155 275	35 798	449 798	395 387	251 380	216 640
11	Net income ÁT	Ft/ha	80 158	149 867	-3 156	334 670	284 586	248 318	19 757
12	Net income by sale Á	Ft/ha	28 673	133 186	-24 513	270 846	199 088	171 982	-82 273

Source: AKI and original

Remark: Cover by produced value_{TĚ} = Net income_{ÁT} =

is seen that the income by sale was very variable, but the costs of production increased mercilessly, therefore the net income was negative in 2008 (and 2004).

If the subsidies are added to the income, the picture shows somewhat more favourable figures of net income. Income by sale and the subsidy together diminished the losses. The subsidies together with the income diminished the losses also in 2004, later increased the income, and turned the loss to positive income in 2008.

Conclusions

The mean yields are countrywide around 20-25 t/ha, they are variable but essentially are stable. The background is nevertheless the heterogeneity of the age and intensity of plantings. Furthermore, the aim of production and the possibilities of the markets are not harmonised, consequently a kind of double attitude is prevailing on a considerable part of production. A clearly defined and consequently practised production technologies aimed to fulfil the requirements of an existing market would help to stabilise the producer's prices as well as the expected yields up to a certain level.

As long as the apple grown for diverse markets and achieved variable yields without a decisive target, the costs of production increased continuously and did not secure a clearly defined set of qualities. A thrifty management could not

compensate the increasing costs. The produced value could not be realised by sale on the markets, therefore the net income together with the subsidies approached at best the 72–75% of the possible income, accidentally much less, occasionally 10% of it.

Acknowledgements

This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences

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